GUIDELINES FOR TRANSFERENCE

ANALYSIS OF THE JAKIN TOOL

FINAL REPORT PREPARED BY CULS (CZ)

INTRODUCTION

The aim of this work is to publish the results of the JAKIN tool analysis, which is used for evaluation on Training Activities. The analysis was based on the requirements of the project JAKIN II of the Leonardo da Vinci Transfer of Innovation project, Ref 2010-1-ES1-LEO05-21048.

Analysis of the JAKIN tool is based on free separate pillars:

- SWOT analysis and design of the new strategies;
- Statistical analysis of the expert evaluation and
- Brainstorming.

Recommendations for the development of the JAKIN II tool are given in conclusion and are based on the JAKIN tool analysis´ results.

SWOT analysis

Variants of strategies were compiled and were based on the SWOT analysis. Alternative strategies are labeled by acronyms as they were generated, i.e. for what combination of strengths and weaknesses, opportunities and threats has arisen. Strengths, weaknesses, opportunities and threats are described in Tables 1 – 4.

Table 1: Strengths

No.	Title	Short description
S1	Wide scope	The SW tool covers a wide range of topics.
S2	Depth	The SW tool analyses specific issues in-depth.
S3	Quantification of outputs	Outputs are quantitative – the SW tool allows effective measurements and comparisons.
S4	User friendly	The SW tool is user friendly for the target group.
S5	Innovative tool	There is no other example of this kind of tool.
S6	ICT requirements	There is no need for advanced HW and SW.
S7	Free of charge	Since the JAKIN SW tool is a tool free of charge companies would only need to invest time to answer the questions and receive feedback in figures immediately.
S8	Useful	The tool helps to systematize continuous training evaluation in the company.
S9	Basic and extended version	The fact that the user can take a simplified test or go deeper into the indicator is an advantage for the user.
S10	Feedback for training activities	Management can draw interesting feedback from this analysis tool.

Table 2: Weaknesses

No.	Title	Short description
W1	Too high grade of complexity	The SW tool is too complex to understand for the majority of managers and experts.
W2	Time consuming	The tool requires dedicating the necessary time to complete all the questions in order to obtain the results.
W3	Applicability	The SW tool is not applicable to all situations/companies.
W4	Sustainability	After the funding period by the EU the SW should ensure resources for the maintenance and its further development.
W5	No verification	The SW tool is new that has not been tested and verified before.
W6	Language purity and grammatical correctness	There are some minor English errors and It´s also necessary to ensure same terminology in the whole tool.
W7	Generalization of outputs	Indicators and interpretations of results should be reformulated to reflect specific needs and environment of specific companies.
W8	Impressionability of outputs	The paradigms and ideals are identifiable to the user but are not explicitly mentioned anywhere. Users might modify the way they answer the questions trying to reach a certain result (when tool is used for justification of something).
W9	Difficult interpretation of results	Figures by themselves do not express anything. The figures miss comparison to key figures; percentages become also difficult to interpret when there are so many different options; the text feedback evaluates every question and only summarizes the overall results poorly.
W10	Design	The user interface could be much more attractive.
W11	Unknown "ideal" (not explicitly mentioned)	The paradigms and ideals are identifiable to the user but are not explicitly mentioned anywhere.

Table 3: Opportunities

No.	Title	Short description
O1	Tool for HR management improvement	The SW tool allows improving knowledge and know-how on informal training and human resources´ strategies.
O2	Lack of competitors in this area	There are no other similar tools offered in this market area at the moment.
O3	Innovativeness	The JAKIN tool is focused on a subject that is still new to most companies. An innovative element for inclusion in the business strategy.
O4	Recent studies on training evaluation and its impact	There are recent studies on these subjects, including other LLP programs that might help to raise awareness for a tool like JAKIN.
O5	Availability	If put on the web it can be very easily accessed by everybody.
O6	EU value	European dimension as an advantage.
O7	Well known and quality projects´ result	Branding that has been created from the Leonardo da Vinci Programme.

Table 4: Threats

No.	Title	Short description
T1	Cultural differences	Making the tool transferable to the different national contexts for usage and interpretation of the results.
T2	Timing	The SW tool should be used an appropriate periods (e.g. not to by submitted during summer holidays / end of the years´ time) so that managers and experts have the time to dedicate to the analysis.
T3	Target group focus	This tool set its goal to serve all types of companies in all areas of business. This is an advantage since everybody can use it but a disadvantage because it could lose applicability for others.
T4	Unstable environment	There is not favorable / positive social and economic environment in some countries in Europe. Due to the global economic crisis, lots of companies are cutting down their training budgets. This can lead to managers presenting some resistance to the adoption of tools like JAKIN.
T5	Emergence of potential competitors	Other competitors looking forward to invading this market (before/during/after the launch of the SW).
T6	Promotion	It is necessary to be able to reach a large number of companies.
T7	Basic knowledge in ICT and HR management	Te tool requires basic knowledge of ICT and HR management.

EXPANSION strategies, constructed of the weaknesses and opportunities are presented in Table 5. W-O strategies overcome weaknesses to pursue opportunities (one or more simultaneously).

Table 5: W-O strategies

Weaknesses (W)	Opportunities (O)	W-O strategies
W1 - Too high grade of complexity W2 - Time consuming W3 - Applicability W4 - Sustainability W5 - No verification W6 - Language purity and grammatical correctness W7 - Generalization of outputs W8 - Impressionability of outputs W9 - Difficult interpretation of results W10 - Design W11 - Unknown "ideal" (not explicitly mentioned)	O1 - Tool for HR management improvement O2 - Lack of competitors in this area O3 - Innovativeness O4 - Recent studies on training evaluation and its impact O5 - Availability O6 - EU value O7 - Well known and quality projects´ result	**W1W7-O1**: Complexity of the tool and generalization of outputs must be based on present requirements of HR management. **W1W7-O4**: Complexity of the tool and generalization of outputs must be based on recent studies on training evaluation and its impact. **W11-O4**: "Ideals" in the tool must be explicitly mentioned based on recent studies on training evaluation and its impact. **W9-O1**: HR management must be able to interpret the results.

BASE strategies, constructed of the strengths and opportunities are presented in Table 6. S-O strategies pursue opportunities that are good fit to the products´ strengths.

Table 6: S-O strategies

Strengths (S)	Opportunities (O)	S-O strategies
S1 - Wide scope S2 - Depth S3 - Quantification of outputs S4 - User friendly S5 - Innovative tool S6 - ICT requirements S7 - Free of charge S8 - Useful S9 - Basic and extended version S10 - Feedback for training activities	O1 - Tool for HR management improvement O2 - Lack of competitors in this area O3 - Innovativeness O4 - Recent studies on training evaluation and its impact O5 - Availability O6 - EU value O7 - Well known and quality projects´ result	**S1S2-O1**: Wide scope and depth of the analysis will give strong tool to HR management and support its´ improvement.
		S3-O1: Tool offers HR management improving based on quantitative comparison.
		S3-O3: Quantitative outputs in this area are not common.
		S6-O5: Tools´ ICT requirements are adapted to the current equipment in organizations.
		S7-O5: Availability is also based on "free of charge" politics.
		S10-O1: Feedback for training activities supports HR management improvement.
		S9-O2O3: Basic and extended version make tool more innovative and competitive.

SURVIVAL strategies, constructed of the weaknesses and threats are presented in Table 7. W-T strategies establish a defensive plan to prevent the firm's weaknesses from making it highly susceptible to external threats (one or more simultaneously).

Table 7: W-T strategies

Weaknesses (W)	Threats (T)	W-T strategies
W1 - Too high grade of complexity W2 - Time consuming W3 - Applicability W4 - Sustainability W5 - No verification W6 - Language purity and grammatical correctness W7 - Generalization of outputs W8 - Impressionability of outputs W9 - Difficult interpretation of results W10 - Design W11 - Unknown "ideal" (not explicitly mentioned)	T1 - Cultural differences T2 - Timing T3 - Target group focus T4 - Unstable environment T5 - Emergence of potential competitors T6 - Promotion T7 - Basic knowledge in ICT and HR management	**W1-T3T7**: Reducing of tools´ complexity will help to use this tool in common HR management. It won´t be only for experts. **W3-T3**: The content must be focused on the target group. **W10-T6**: Good and timeless design will help to promotion. **W7-T1**: Outputs must respect cultural differences.

DEFENCE strategies, constructed of the strengths and threats are presented in Table 8. S-T strategies identify ways that the firm can use its strengths to reduce its vulnerability to external threats.

Table 8: S-T strategies

Strengths (W)	Threats (T)	S-T strategies
S1 - Wide scope S2 - Depth S3 - Quantification of outputs S4 - User friendly S5 - Innovative tool S6 - ICT requirements S7 - Free of charge S8 - Useful S9 - Basic and extended version S10 - Feedback for training activities	T1 - Cultural differences T2 - Timing T3 - Target group focus T4 - Unstable environment T5 - Emergence of potential competitors T6 - Promotion T7 - Basic knowledge in ICT and HR management	**S1S2-T3**: It is necessary to adjust the width and depth of content to the required level of the target group.
		S9-T7: Basic version is used for the group of basic knowledge owners, extended version is for experts in HR management.
		S4-T3: The tool must be user friendly for the target group.
		S5-T5: High grade of the innovativeness of the tool reduces the risk of threat from potential competitors.
		S6-T7: The tool must be based on current ICT. This contributes to its widespread deployment.
		S7-T5: In the case of "free of charge" tool is reducing threat from potential competition.

Statistical analysis of the expert evaluation

Statistical analysis comes from "Methodology guidelines for evaluation of JAKIN I". The evaluated Domains which were structured into a number of Fields are presented in the Table 9. Domains, Fields and keynotes constitute the "domain dimension".

For ranging of keynotes an ordinary five-grade scale is used in which the following rule is accepted: "The greater grade the better evaluation – the lesser grade the worse evaluation". How relevant is the keynote to the Field? Grades are presented by numbers {1, 2, 3, 4, 5}:

1. Not relevant
2. Some relevance
3. Medium relevance
4. Highly relevant
5. Most relevant

Each Field was evaluated subject to three possible scenarios of future Europe development:

Scenario 1: "A prosperous and more just Europe".

Scenario 2: "A turbulent world"

Scenario 3: "Recession and reorientation"

Evaluation was provided by experts: participants of the brainstorming procedure and projects´ partners.

Average values of the each field are presented in the Table 9. In the last column are the values that were calculated on the basis of the weighted average for each scenario. Individual scenarios were assigned to the probability of their realization. The probabilities are based on current situation of the economic development in Europe and are based on estimates of experts – scenario 1 {0,1}; scenario 2 {0,6}; scenario 3 {0,3}. All calculated values given in Table 9 are rounded to 2 decimal places.

Table 9: Average values for the each Field

Domains	Fields	Scenario 1	Scenario 2	Scenario 3	Weighted average
Content	Relevance to explored topic	3,96	4,00	4,07	4,02
	Completeness	3,82	3,54	3,11	3,44
	Learn-ability of the content	3,71	3,71	3,50	3,65
Design	Attractiveness	2,71	2,96	3,07	2,97
	Efficiency	3,64	3,50	3,39	3,48
	Controllability	3,50	3,57	3,46	3,53
	Helpfulness	3,50	3,61	3,64	3,61
Importance	Work & Skills	3,96	4,18	3,68	4,01
	The Digital Enterprise	3,96	4,14	3,89	4,05
Social impacts	Social Inclusion	3,75	3,89	4,03	3,92
	Regional development	3,46	3,54	3,64	3,56

The statistical hypothesis being verified is formulated as "The JAKIN I tool is well functioning from its content, design and importance and no other substantial changes are needed". Critical decision values are considered for two disjunctive groups of evaluators:

- Evaluators who rank by grades {1, 2, 3} This ranking is considered as expression of the negative evaluation.
- Evaluators who rank by remainder grades. This ranking is considered as expression of positive evaluation.

Critical values for testing of hypothesis are:

1. $E\{\mu\} > 0,6$. Than the hypothesis is accepted and no changes in the part of the JAKIN I tool, relevant to the evaluated Filed, are needed.
2. $E\{\mu\} \leq 0,6$. Than the hypothesis is not accepted and changes in the part of the JAKIN I tool, relevant to the evaluated Filed, are needed.

All calculated values given in Table 10 are rounded to 2 decimal places.

Table 10: Testing of hypothesis

Domains	Fields	Critical values
Content	Relevance to explored topic	0,76
	Completeness	0,46
	Learn-ability of the content	0,64
Design	Attractiveness	0,28
	Efficiency	0,46
	Controllability	0,60
	Helpfulness	0,51
Importance	Work & Skills	0,73
	The Digital Enterprise	0,73
Social impacts	Social Inclusion	0,70
	Regional development	0,49

Brainstorming and recommendations

Brainstorming and recommendations come from the last Domain - Comments. It is split into 5 fields:

- missing topics, useless topics (Table 10);
- recommendations (Table 11);
- new ideas (Table 12);
- design for SMEs (Table 13) and
- time spent (Table 14).

Table 10: Missing topics, useless topics

Missing topics, useless topics	It is not clear why one part uses the odd and the second part even scale for evaluation. It is wrong from the statistical point of view.
	Transfer of data to Excel does not work well.
	Some topics could be joined together, to reduce structure of the tool.
	Include new topics and more related with training and results.
	The tool should use indicators according to the sector of activity of each company.
	For each sector, the indicators should have different "weights" on the final results.
	Some of the topics are irrelevant for some companies.
	There should be more sectors of activity in section "general information".

Table 11: Recommendations

Recommendations	Inform the user about how the algorithm is processing resulting information.
	There should be an option to export the results to other programs, e.g. Microsoft Excel.
	Process of the calculation - is it based on probability? It is not conclusive.
	It is used 2 types of scales - odd and even-numbered. Avoid odd scales for evaluation, as people tend to choose the "middle" option.
	It is overvalued… Non-real benefit!
	Graphical design is too monotonous, too small window. Improve the attractiveness with more graphics.
	Too much detail for poor outcome.
	Topics presented in the tools are accurate for specialist in the field but not for SME, students or young people.
	The tool needs special introductory for different population.
	More orientations (mark icon?) are needed for none specialist (for example that could help to rate the influence of each indicator).
	Include/ask for more quantitative and objective topics.
	Ask for evidence of the answers.
	More feedback during the evaluation, not just at the end of it.
	Printable reports, there is no option to have a printed report at the end of evaluation with graphics.
	There must be a control of the answers given by the user to see if there is a logical framework of the company position.
	Group percentages by different categories, as it can be very difficult to get the meaning of percentages on 15 different topics.
	There should exist a database with best practices or case studies that could give specific advices to the SME managers.
	The tool should evaluate the origin of training: if it's internal or external.
	The tool should consider different motivations for training: mandatory (e.g. by law or by suppliers) or voluntary.
	Make the platform more individual, with an option to add your notes or calendar etc.
	Language barriers The SW tool should be appropriately translated into all different languages to be fully understood and used by all stakeholders involved.

Table 12: New ideas

New ideas	Add the tutorial.
	Make a new design (e.g. flash animation) - better marketing for better sell.
	More variants of UI?
	Support of the export to usual types of files (xls, csv, pdf, etc.).
	More variants - splitting based on relevant target groups.
	Introductory pages: Improve Characteristics and goals of the JAKIN tool with new user-friendly computer tools, presentations, graphics, figures, statistical data, figures,...
	Include Best Practices that let comparison with others.
	Include partial results so managers can prove that is helpful to finish the evaluation.
	For security reasons, the new tool should work online as well as offline.
	The tool should allow the user to create a personal profile, where it would be possible to save definitions and previous results.
	To add good practices, generated by the tool.
	Allow the users to leave testimonies or comment on the tool.
	The tool should include more indicators, according to the sector of activity of the company.

Table 13: Design for SMEs

Design for SMEs	The tool should be more friendly and visual.
	It is not clear for the user which version (reduced or extended) suits better for his enterprise profile.
	The manager should be able to select which are the indicators he considers more important for his company.
	Advices given by the tool must be more specific, as usually SME have smaller (and sometimes less qualified) teams.
	To produce the results in downloadable format, that the SMEs good print it as a proof of participation in the project (symbolic reward).
	Simplicity and accurateness The SW tool should be kept as much simple as possible and made closer to SMEs reality (shorter, simpler and with more concrete "real life" examples). The used terminology and concepts are too complicated for most SMEs managers and experts.

Table 14: Time spent

Time spent	JAKIN tool takes too much time to do it right.
	The extended version takes a lot of time.
	Takes too long to fill the entire questionnaire, which may demotivate some users.
	There should be an option to select which indicators the user thinks are useful. This would allow him/her to spare time.
	A possibility to enter the data in different times, not requiring to complete the questionnaire at once is crucial.

CONLCUSIONS

Two approaches were used to evaluate JAKIN tool. The first approach was based on the SWOT analysis and the second was based on qualitative and quantitative analysis prepared by CULS partner in project (CULS methodology).

SWOT analysis comes out the involvement of all participating partners. Preparation and use of SWOT analysis can be summarized as follows:

- 1st step: Separately prepared SWOT analysis.
- 2nd step: Joining of the separated SWOT analysis.
- 3rd step: Data cleaning – finding the redundancies; verification of the domains´ right classification.
- 4th step: Creating of S-O, S-T, W-O and W-T strategies.

Strategies have been developed with regard for the planning of the new tool JAKIN II (see in Tables 5, 6, 7 and 8).

CULS methodology coming out from the brainstorming organized during ERIE conference in the June 2011.

Qualitative part of analysis includes ideas about:

- missing topics, useless topics;
- recommendations;
- new ideas;
- design for SMEs and
- time spent.

Especially valuable are the recommendations for the development of new tool (see in Table 11).

Quantitative approach was based on expert evaluation and following statistical analysis.

Quantitative analysis clearly indicates that major weaknesses are follows (sorted by importance):

1. attractiveness of design;

2. efficiency of design;
3. completeness of content;
4. impacts in regional development;
5. helpfulness of design and
6. controllability.

It is necessary to eliminate these weaknesses in the development of the new tool.